CALFED Bay-Delta Program Project Information Form

Watershed Program - Full Proposal Cover Sheet

Attach to the cover of full proposal. All applicants must fill out this Information Form for their proposal. Failure to answer these questions and include them with the application will result in the application being considered nonresponsive and not considered for funding.

1. Full Proposal Title: **Contra Costa County Watershed Atlas and Creek Restoration Strategy**
   Concept Proposal Title/Number: **0137**
   Applicants for **Dennis M. Barry, AICP, Community Development Director**:
   John Kopchik, Senior Planner, Contra Costa County Community Development Department (Project manager)
   Ann Cheng, Contract Water Resource and GIS Specialist, CCCCDD (Project coordinator)
   Mitch Avalon, Deputy Director for Flood Control, CCC Public Works Dept. (Project guidance)
   Lis Klute, Contract GIS Coordinator, CCC Public Works Department (Technical guidance and GIS Analysis)

Applicant Mailing Address: 651 Pint Street
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Fiscal Agent Name (if different from above): Contra Costa County Community Development Department
Fiscal Agent Mailing Address: (Same as above)
Fiscal Agent Telephone:_____ Fiscal Agent Fax:_____ Fiscal Agent Email:_____

2. Type of Project: Indicate the primary topic for which you are applying (check only one)

_____Assessment	_____Monitoring
__X__Capacity Building	_____Outreach
_____Education	_____Planning
_____Implementation	_____Research

3. Type of Applicant:

_____Academic Institution/University	_____Non-Profit
_____Federal Agency	_____Private party
_____Joint Venture	_____State Agency
__X_Local Government	_____Tribe or Tribal Government

4. Location (including County):

What major watershed is the project primarily located in:
_____Klamath River (Coast and Cascade Ranges)
_____Sacramento River (Coast, Cascade and Sierra Ranges)
_____San Joaquin River (Coast and Sierra Ranges)
__X__Bay-Delta (Coast and Sierra Ranges)
_____Southern CA (Coast and Sierra Ranges)
_____Tulare Basin (Coast, Sierra and Tehachapi Ranges)

5. Amount of funding requested: $ 50,000
Cost share/in-kind partners? ___X_ Yes _____No
Identify partners and amount contributed by each:
Contra Costa County Community Development: $54,155
SWRCB - Prop 13: $80,000

6. Have you received funding from CALFED before? ____Yes __X__No
If yes, identify project title and source of funds:

By signing below, the applicant declares the following:

1. The truthfulness of all representations in their proposal
2. The individual signing this form is entitled to submit the application on behalf of the applicant (if the applicant is an entity or an organization)
3. The person submitting the application has read and understood the conflict of interest and confidentiality discussion in the Watershed Program Proposal Solicitation Package and waives any and all rights to privacy and confidentiality of the proposal on behalf of the applicant, to the extent provided in the Proposal Solicitation Package.

Dennis M. Barry, AICP, Community Development Director

Printed name of applicant

_____

Signature of applicant

Response to Questions Posed in the "Instructions for Preparation of a Full proposal" for the CALFED Bay-Delta Watershed Program

1. Describe your project, its underlying assumptions, expected outcomes, timetable for completion, and general methodology or process. 3 pages

Project Abstract

The Contra Costa County Community Development coordinates a partnership organization of non-profit organizations, local governments, environmental education groups, and regulatory agencies called the Contra Costa Watershed Forum (our first-draft website is at www.cocowaterweb.org). The purpose of the Watershed Forum is to coordinate countywide discussion of, and planning for, creek and watershed issues. The Forum also seeks to identify opportunities for multi-objective enhancements of creeks and watersheds. To that end, the Watershed Forum conceived a proposal for developing a countywide planning document for all 20 primary watersheds in the County to be called the Contra Costa County Watersheds Atlas and Creek Restoration Strategy ("Atlas").

On behalf of the Watershed Forum, the Community Development Department submitted an $50,000 grant request to the SWRCB for Proposition 13 funds to develop the Atlas. We are also pledging $54,000 of in-kind match from Contra Costa County. In our application, we proposed to include the following elements in the project:

- Catalogue, assess, and gather existing map-based and statistical data on watersheds and creeks in the County.
- Compile an inventory of completed, current, and proposed creek restoration projects in the County.
- Develop a county-wide watersheds GIS based on the existing data and the inventory of restoration projects.
- Develop the Atlas document through the Watershed Forum with separate chapters on each watershed. Each chapter would contain a map of the watershed, charts with detailed statistical information on proposed projects and physical features of the watershed, and text describing the watershed and its restoration needs and opportunities. Two versions of the Atlas would be prepared: one paper document, one interactive web document.

With this proposal for $50,000 from CALFED, we seek to augment the Atlas in the following ways:

- Harness grassroots citizen volunteers for a Global Positioning System ("GPS") inventory of creek resources and unique watershed features.
- Expand citizen involvement in the development of restoration strategies and priorities for each watershed
- Facilitate local leadership in developing educational outreach efforts for county citizens about creek, watershed, and water quality issues. Expose the hidden value of creeks to our communities. Identify the potential benefits of enhancing these resources.

General Methodology

Augmentation of the Atlas proposal with CALFED funding would have the following two main results:

- "Ground-truthing" of creek resources by citizen volunteers to confirm and augment existing map-based data
- Expansion of watershed level public processes to provide a framework for watershed management by local leadership.

More specifically, the funding we seek from CALFED to achieve the above objectives will be used for the following tasks (all of which will be conducted through, and guided by, the Contra Costa Watershed Forum):

1. Develop a list of observations and features to be recorded and mapped using Global Positioning System ("GPS") units. This list will be generated by identifying our largest data gaps and prioritizing through the Watershed Forum those gaps which need filling first.
    a. Examples of Features to be mapped include: creeks and tributaries not recorded on existing maps (there are many), pipe outfalls into creeks, barriers to fish passage, channel conditions (e.g., %veg cover, concrete, open ditch, culverted, etc.), unique features, etc.

2. Develop a data collection protocol for citizen volunteers, based on a literature review of existing protocols. This protocol will include a detailed field kit for the volunteers to take with them. (We intend to use the County's new half-foot pixel and one foot pixel digital orthophotos to provide each data collection team with a map for orientation and ground-truthing.)
3. Purchase four GPS units.
4. Conduct data collection training and planning meetings.
5. Collect data and watershed observations for not less than five major watersheds in the County (and hopefully all 20), with priority to large watersheds such as Marsh Creek, Kirker Creek, Walnut Creek, and San Pablo Creek.
6. Catalog and publish results in the Watershed Atlas (both in paper form and on the web).
7. Hold a series of public education and input seminars on the unique features, restoration possibilities and ecosystem health of the creeks that run through their communities. A first round of meetings will be held in advance of the GPS data collection task to promote and solicit local involvement in ground-truthing current creek conditions. We hope local residents may be more enthusiastic about participating knowing data collected will be published in the county's first watershed atlas. A second round of meetings will be held after the Atlas is completed. This second round of meetings will emphasize next steps, including building on the Atlas to implement specific restoration projects.

Expected Outcome

The above tasks constitute an augmentation of an earlier proposal to the SWRCB, the Contra Costa Watersheds Atlas and Creek Restoration Strategy. The Atlas project will provide an overview of the current status and future needs of all significant watersheds in the County. Each watershed would be covered in a separate chapter. The Atlas would be published in written form and on the web. A sample layout of a chapter in the augmented "Atlas" document is provided on the 11x17 page with the Watersheds of Contra Costa County on the other-side. We intend to use development of the Atlas to focus and coordinate the various GIS building and data collection tasks proposed in this and the earlier grant proposal to the SWRCB.

We expect the augmented Watershed Atlas project to have the following outcomes:

- Provide the CCWF with a point of focus and a process for developing its vision of the future of creeks and watersheds in the County; Create a document to explain and describe this vision to those not involved in the Forum.
- Connect citizens in a new way to their local creeks and to local government by involving them in a meaningful hands-on data collection effort.
- Generate new GIS data on creek locations, barriers to fish passage, and other information that we currently lack.
- Provide a consolidated reference document on County creeks, watersheds, and past/future restoration projects with statistics, maps, and contacts.
- Provide an overview of future needs and goals for each watershed.
- Help specific projects to secure grant funds by documenting how those projects fit in to a regional context and by demonstrating that those projects have broad recognition
- Provide a tool for prioritizing watersheds for restoration or detailed planning.
- Diagnose watershed problems and explore innovative solutions using the relatively inexpensive tool of GIS modeling.
- Test and document outreach strategies for communicating to interested individuals and groups in all the watersheds in the county.
- Development of an initial coordinated protocol for collecting data on creeks. By doing this through the Watershed Forum, we hope to develop a protocol that "sticks" and therefore ensures that future data collection efforts are performed in a consistent manner and may be plugged in to a coordinated data management system.
- Facilitate development of a geographically, ethnically, and economically diverse local leadership on creek and watershed issues.
- Support the CCWF's Mitigation Coordination Program by providing a coordination tool.
- Document the need for, and the potential use of, new funds for creek restoration and pollution control.
- Identify creeks and watersheds in need of more attention.

- Supply content for the CCWF web page.

Timetable for completion – Please refer to the attached Program Budget Cost Sheet

Funding Strategy

As mentioned previously, we have already submitted a grant application to the SWRCB for the basic Watershed Atlas project. The funding we seek from the SWRCB would pay for the following components:

- Development of Atlas document itself, both in paper and interactive web-based formats.
- Inventory and mapping of Past, Current and Planned Restoration Projects.
- Tabular data on physical and biological features for each major watershed in the County. For example, data on features such as: Length of creek (concrete, culverted, open, undisturbed, restored); Flow monitoring sites (combine this geographic reference with data found on Flow (cfm's) of Winter, Spring, Summer, Fall averages); Percent of Watershed Area (Impervious, Commercial, Residential, Open Space, Industrial, Flood Plain); etc.
- Bibliography of data, publications, and community contacts for each watershed.

If funding from the State Water Resources Control Board isn't awarded, the main hurdle we would face in implementing any tasks funded by CALFED would be the lack of a document for presenting and synthesizing results. Several alternatives are available to us should this occur. One, we would apply for funds from other sources. We believe the development of the Atlas document is a worthy project that will attract funding—we just need to find the right grant source. Second, we can develop a fall-back documentation strategy. We have two available methods for doing so. We intend to hire Abigail Fateman and Christina Yin of the University of Michigan, to assist us in coordinating the GPS data collection effort during their time away from Michigan. This work fits into their Masters' project requirements (their course-work in the Natural Resources Program requires them to perform hands-on, practical work for a client, in this case the Watershed Forum). Their Masters' Program requires them to provide final written reports or products that fill the needs of their client (as well as of their professor). This work will be an in-kind contribution of the students and the University to the project. We hope to plug this work into the Atlas, but if the Atlas is not funded, the reports submitted by the students could serve as a template for an alternative documentation provided by the County. In addition, the Watershed Forum website is already up and running in a draft fashion, and straightforward, simplified documentation of the outcomes of CALFED-funded tasks could be uploaded there.

This Proposal Could Be A Tool For Prioritizing Implementation Projects:

The response to our conceptual proposal requested clarification of how the proposal related to prioritization of actual creek and watershed restoration projects. The Watershed Forum considered making prioritization a specific component of the Atlas project but determined that, because the Atlas was to independently address every watershed in the County, prioritizing implementation projects within each watershed or between watersheds would be an extremely involved and time-consuming process that would hold up prompt preparation of the Atlas. Likewise, since different funding sources have different purposes, no one prioritizatiuon system would be adequate (i.e., fisheries priorities may not match recreation and scenic priorities which may not match water quality priorities). However, that is not to say that development of the Atlas will not assist or lead to prioritization decisions. Clearly it would. The Atlas will make clear which watersheds in the County need additional planning. It will also illustrate which watersheds are most suitable for, say, restoration of anadromous fisheries, protection or restoration of riparian habitat connectivity, etc.

2. Describe your qualifications and readiness to implement the proposed project. 2 pages

a. Describe the level of institutional structure, ability and experience to administer funds and conduct the project. Identify the fiscal agent responsible for handling the funds

The Contra Costa County Community Development Department, together with its application partners and other members of the Watershed Forum, has a track record on creek and watershed issues.

- Part of a team that completed 3 restoration plans for different reaches of Walnut Creek in 1993.
- The Project Manager and Project Coordinator were the key organizers of the 1999 Contra Costa County Creek and Watershed Symposium which was attended by more than 300 people. That effort
- Project staff founded the Contra Costa Watershed Forum following the Symposium and continue to coordinate and staff that body.
- Mitch Avalon, who will provide project oversight for this proposal, is the County's Flood Control Director and has extensive experience managing a large number of personnel, consultants, not to mention a District budget.
- John Kopchik, project manager, has managed a range of complex natural resource projects including: 1) a Coordinated Resources Management Plan for the Caldecott Wildlife Corridor, 2) a pre-HCP Biodiversity assessment of 227,000 acres in eastern Alameda and Contra Costa Counties that included a 2-year consensus process among ranchers, conservationists, developers, and wildlife agencies, and 3) a Board of Supevisors subcommittee and attendant citizen committee to explore the feasibility of local ballot measure to provide funding for open space protection.
- The graduate students we have identified to assist us in the GPS data collection effort, Abigail Fateman and Christina Yin of the University of Michigan, have substantial academic and practical experience in the hydrological sciences and can provide a valuable conduit to the printed scientific literature and knowledge of the academic community.

The fiscal agent for this project will be the Contra Costa County Community Development Department.

b. Describe technical support available (including support needed for environmental compliance and permitting) to begin and complete the project in a timely manner.

Contra Costa County has substantial experience with computer mapping and GIS, and the personnel that would work on this project are intimately involved with both GIS and watershed matters.

- Launched a GIS program in Community Development as a means to complete a required inventory of total acreage of urban and non-urban land in the County as a part of the Urban Limit Line adjustment proceedings http://www.co.contra-costa.ca.us/depart/cd/advance/6535_map.pdf
- Public works staff involved in this proposal have developed and maintained a very detailed and accurate CAD map of all parcels in the County. Recently, they enabled web-browsing of this parcel map, converted it to a GIS, and produced County-wide orthophoto and street centerline maps registered to the parcel base. See: http://www.co.contra-costa.ca.us/depart/pw/computerservices/gis1.htm
- Created a web-based form and accompanying watershed map in collaboration with existing regional databases for creek and wetland enhancement projects in the county. See link at top of http://www.cocowaterweb.org.
- West County Watershed Mapping Group
- CEQA compliance is a regular activity for the Community Development Department as the Advanced and Current Planning, Building Inspection, Transportation and Conservation Departments, Redevelopment Agency are all housed within it's jurisdiction.
- The Community Development Department has a sophisticated level of computing and software capability.

c. List any previous projects of this type you or your partners have implemented, funded either by CALFED or other programs.

See part a, above, plus:

- CALFED has already funded watershed planning efforts on Kirker Creek and Alhambra Creek. These efforts, though at different stages, will be integral to the baseline data collection effort in their contribution of experience and knowledge. In turn, these planning efforts will benefit from the development of the baseline GIS this project would generate.
- Digitizing of land use maps.
- Soliciting reports of restoration and enhancement project data from the public via an online form with an ArcView produced project-locating map. The availability of this form was publicized through the network conduit of the Contra Costa Watershed Forum.

Provide a completed budget cost sheet and describe the basis for determining project costs, including comparisons with other similar projects, salary comparisons, and other listed costs?
2 pages

Please see attached budget and budget summary. The basis for determining these costs include our recent experience in: 1)organizing natural resource studies and planning processes that involve the public, and 2) completing complicated GIS tasks such as the conversion of our 1:4000 scale land use maps into a digital GIS built over the Public Works Department highly detailed digital parcel base. Such experience has given us fairly accurate idea of how many hours are required to build a new watershed GIS layer or to organize and perform three GPS training meetings.

An additional note on our budget: We believe we would provide a very useful product a very reasonable cost. We are able to keep the costs down for four reasons: 1) the County will contribute the costs of its permanent staff to manage the project; 2) we plan to tap into the substantial volunteer labor pool that is the Watershed Forum; 3) we plan to use an in-house contractor intern hired for her GIS skill to provide the bulk of the mapping work; 4) we plan to use graduate students from the University of Michigan who will donate part of their time.

Describe the technical feasibility of the proposed project. 2 pages

d. Describe any similarity to previously implemented successful projects in this community or elsewhere.

e. If the project proposes a new approach or new method with a high likelihood of adding new knowledge or techniques, or with the potential to fill identified gaps in existing knowledge, describe how it will do so, and what monitoring components will provide substantiation of results.

- *All activities of the Contra Costa Watershed Forum are documented on the forum's website www.cocowaterweb.org.*
- *Archived meeting agendas and minutes are accessible to the public.*
- *The proposed project will be initiated from the watershed forum meetings and documentation of meeting results will also be available from the website.*
- *GPS data collected from this project along with other publicly available datasets will be cataloged and described in the Atlas to publicize existence of the data and avoid time consuming and avoidable efforts of duplication.*

The County Watershed Atlas and Creek Restoration Strategy will be the main product of combining the results of the community outreach and education phase with the watershed assessment phase. This document is key to getting the entire county on the same page of understanding the baseline watershed characteristics and planned activities within each watershed. This will be a good resource for all levels of ecosystem management involving watersheds in the county's jurisdiction. Through funds budgeted in the proposal to the SWRCB, this document will be published on the Watershed Forum website in an interactive format with electronically available data with instant access.

f. Explain how the finished project will be maintained as necessary, and to what degree it may require continued funding from outside the community.

We believe the key benefit of this project is the potential to foster comprehensive and effective implementation of creek enhancement and water quality improvement projects throughout an entire County.

- The symptoms of damaged creeks and poor water quality are obvious, but detailed information of the sources of the problem and on ways to address them are neither obvious or available.
- This proposal seeks to provide this necessary data and promote a common understanding among citizens, planners, and private organizations throughout the county of the tools available to fix them.
- Creeks have not been addressed in past local funding measures for open space protection. Discussions are underway regarding new local funding measures, but creeks may be overlooked again unless the specific needs and value of creek resources can be described.

The proposed Atlas document will serve as a framework for future planning and implementation of projects to restore creeks and address non-point source pollution. This baseline watershed assessment framework will allow watershed level assessments that would lead to eventual implementation of projects that treat the fundamental causes of creek and water quality problems in a coordinated manner, rather than in an isolated manner focused on symptoms. This improvement will lead to projects that sustain watershed benefits in perpetuity. For instance, if this projects demonstrated the need and potential foe constructing sediment basins, and if these basins were constructed then sediments that would otherwise have smothered habitat, aggravated turbidity, or diminished channel capacity, then the benefits of this project would extend the lifetime of the sediment basin.

We hope and expect this proposal will be succeeded by the following future tasks:

a) decentralized implementation of restoration strategies developed by the current proposal
b) continual updating and augmentation of the baseline watershed GIS
c) coordinated, comprehensive planning and design work for restoration projects, perhaps aggregating multiple projects and watersheds.
d) A second Contra Costa County Creek and Watershed Symposium, perhaps in 2003, four years after the initial symposium in 199 launched the Watershed Forum and increased focus on creeks and watershed in Contra Costa County.

3. Describe how the monitoring component of the project will help determine the effectiveness of project implementation and assist the project proponent and CALFED with adaptive management processes. 3 pages

a. Identify performance measures appropriate for the stated goals and objectives of the project.

As our proposal relates to developing baseline watershed data and to restoration planning, we propose to satisfy the monitoring and reporting plan requirements of this funding program by:

1) Submitting this baseline information as a tool for monitoring future capital improvement projects
2) Submitting a final report at the conclusion of the project evaluating its effectiveness and success in meeting stated goals and objectives.
3) The number of creek and watershed restoration projects that take place as a result of the minformation gleaned from this project will be a good indicator of success. Also, continued and expanded participation of a diverse range of interests in watershed events and planning activities will be another good indicator.

b. Describe how this project will coordinate with and support other local and regional monitoring efforts.

There is a high level of support and participation from the local community and agencies. The Contra Costa Watershed Forum was created from the planning group that coordinated and presented the Contra Costa Creek and Watershed Symposium in April 1999. This event drew over 300 people for a one day event to discuss needs and opportunities for enhancing creeks and watersheds. The Forum meets on the first Thursday of every odd month and has a broad and comprehensive list of participating organizations. The Forum originated the concept of performing this county-wide watershed inventory and framed the Atlas proposal.

The discussion for coordinating local and regional monitoring efforts has already begun. A sub-group of the forum was created as a result of an agenda item at the CCWF meeting of March. They plan to meet and take inventory of monitoring efforts throughout the county and establish a protocol for volunteer creek groups. There is the organizational motivation to get on the same page.

This project serves as the linkage between community and local watershed level projects with the regional scale.

The organizational structure and attendance of the watershed forum meetings by a wide variety of organizations and agencies reflects the existing coordination. Examples of coordination?

c. Provide a description of any citizen monitoring programs that will be a part of this project.

Outreach

The proposed project augmentation is centered around organizing citizen gps creek mapping volunteers. We expect the project will effectively energize and involve citizens in watershed issues by providing them a hands-on experience that contributes actual useful information for a larger watershed management effort. This project will solicit involvement and participation by community members residing in the watershed of interest. Constituents that aren't plugged into the local, active, organized friends of creeks groups will be solicited for involvement. Local creek groups will be asked for their input and suggestions of effective ways to get a high turn out for participation in addition to successful training protocols.

d. What monitoring protocols will be used, and are they widely accepted as standard protocols?

Protocol

The exact protocol for volunteer training and the list of observations and features to be recorded will be developed with local groups and a sub-group of the Watershed Forum. Arriving at the final protocol will involve extensive input from the entire Watershed Forum (a preference the group has arrived at as of the last watershed forum meeting where the proposal submitted to Calfed was discussed) and solicitation of input from appropriate agencies and creek groups.

This project can greatly enhance existing monitoring programs by GPS-ing sites where local creek groups collect ongoing creek monitoring data.

e. Describe how the type and manner of data collection and analysis will be useful for informing local decision making?

The Watershed Atlas will be useful for planners in updating the Conservation Element of the County's General Plan which currently lacks a section on creeks and watersheds.

Public officials will be able to confirm funding and support for local creek groups by checking the validity of their plans in context with the goals of the entire watershed or region. These groups will have more credibility by showing their cooperation in collaborating with other groups in the area.

Identifying and previously unmapped creek and tributaries will help land use agencies to more accurately assess the impacts of proposed projects. Previously unkown impacts to creeks may be avoided and minimized in the future if we have a better record of where these resources are.

4. If this project is to develop specific watershed conservation, maintenance or restoration action, describe the scientific basis for the actions, describe the scientific basis for the action(s) described in the proposal. 2 pages

a. Any assessment of watershed condition(s) that has already been developed by you or others.
The Alhambra Watershed Coordinated Resource Management Plan was recently completed.

b. Previous assessment(s) used to establish you project goals and objectives, or to inform the basic assumptions
There have been previous assessments made for individual watersheds. However to get the activities in the county coordinated there needs to be a county-wide strategy and approach to be inclusive and maximize the ability to share ideas and success stories.

c. A description of the scientific assumptions used to develop the project goals, objectives and proposed actions, and the degree to which those assumptions are widely accepted (both in the science community as a whole and in the watershed community).
We are planning to create the scientific baseline needed for all watersheds. This project will create the framework for analysis to take place in all watersheds at in the county.

d. A discussion of how the proposed actions are (aren't) consistent with the scientific assumptions and previous assessments completed in the watershed.
The proposed project is seeking to ultimately address the needs of the county in combating the following problems which are based on scientific assumptions in addition to socio-economic and political assumptions.

Key Problems:

Our creeks have been drastically and repeatedly modified over the last 150 years.

- Agricultural and rural settlers re-routed creeks, reclaimed flood plains with levees, and increased sediment levels. Towns sprung up in major valleys and reclaimed flood plains.
- Massive floods throughout the County in the 1950's hit places like downtown Concord very hard and led to emergency action by Governor Earl Warren.
- The Army Corps of Engineers and newly formed Flood Control District controlled flood risks by transforming miles of creek into concrete u-shaped channels, by building bigger levees and by developing energy dissipating drop structures.

Rapid urbanization has dramatically increased non-point source pollution and impervious surfaces.

- Outside of San Francisco Count, Contra Costa County has the highest percentage of developed land.[1]
- Urban settings such as those in Contra Costa County foster a thousand points of non-point source pollution. From pesticides and fertilizers on lawns and gardens, to petrochemicals on roads and parking lots, to pathogens from leaking septic systems, the cumulative impacts of small environmental insults is substantial.
- The 303d list of impaired water-bodies defines all major surface waters in the county as impaired by diazinon, and the sections of the bay to which they drain are listed for many other constituents.
- Increased impervious surfaces decreases soil percolation, increases the rate and magnitude of surface runoff, and causes scouring, channel incising and stream bank destabilization. Destabilized banks are often armored, compounding the scouring problem downstream. Mobilized sediments settle in slow water, burying habitat and reducing capacity.

Important Water-Dependant Terrestrial Habitat Has Been Lost and Fragmented

- Riparian habitat and permanent and seasonal wetland have been paved, buried by rip-rap, undercut by scouring, and blanketed with sediment. The loss of habitat and habitat connectivity disrupts ecological functions, threatens wildlife and obscures natural scenery.

Challenges and Opportunities:

- The County's urban growth will continue. The Association of Bay Area Governments ("ABAG") predicts the County's population will grow 24% in 20 years, the County will have 4 of the region's 10

[1] 26.2%, according to the Association of Bay Area Governments "Status and Trends 2000" report.

fastest growing cities, and the County has the largest percentage of land available for development in the Bay Area. [2]

- The Board of Supervisors recently tightened existing growth control measures by shrinking the voter-approved Urban Limit Line. Such policies present opportunities for minimizing the impacts of future growth and for promoting in-fill development. But many in-fill opportunities lie in harder to develop parcels along creeks. Careful planning will be necessary to incorporate creek enhancements as features in revitalization strategies. Otherwise, creeks may be viewed as obstacles to housing.
- Many of the County's 40 year-old flood control facilities have silted-in or need repair. Will they be dredged and rebuilt? Or will they be enhanced or replaced with alternative designs with more ecological and aesthetic value?
- The recently created Contra Costa Watershed Forum has forged many partnerships within the past year and a half. Interest in creeks is high and coordination on watershed issues is better than ever.
- Significant advances in Geographic Information System ("GIS") capability are occurring throughout the County. The Public Works Department recently produced countwide aerial orthophotos (1:400 scale), and the Community Development Department is building a land-use GIS. These and other improvements may be a boost to watershed analysis.
- Contra Costa County Supervisor John Gioia has made creeks and creek mapping a priority. He initiated a committee called the West Contra Costa County Watershed Mapping Group. They view maps as a tool for educating the public on the connection between watershed and stream.

e. A description of what baseline knowledge was used to support the management actions described in the proposal, or the likelihood that the management actions will generate a more robust baseline knowledge.

As stated above this exercise is to create the baseline set of knowledge which each watershed and subwateshed group with the organizational structure in place can utilize for further development of specific management actions. Participants in the Watershed Forum have identified the lack of a baseline watershed GIS and the lack of a coordinated mechanism for collecting data using volunteers as key shortcomings that need to be addressed.

[2] ABAG "Status and Trends 2000"

5. A. How will the proposal address multiple CALFED objectives (see Section I) in an integrated fashion, with emphasis on water supply reliability, water quality , ecosystem quality, and levee stability objectives CALFED has established for Stage 1 of the program?

This project only relates to the Water Quality and Ecosystem quality question.
The primary elements of the Bay Delta program that this project will promote are the Ecosystem Restoration and Water Quality Program aspects. Citizens involved in developing the Atlas and collecting field data on creeks will gain an understanding of how restoring fisheries and other resources on their locals creeks ties into the larger CALFED effort to restore the health of the hub of the Contra Costa County creek network, and of watersheds covering much of the rest of the state, the San Francisco Bay-Delta estuary system.

This project will promote all three initial implementation priorities. The project will:

- *Facilitate local leadership in developing educational outreach programs about the community's watershed.*
    - Give locals an opportunity to collect needed baseline watershed characteristics by providing tools and training.
    - Include consensus-derived objectives about watershed management actions in the County Watershed Atlas.
- *Collect baseline data for status of watersheds throughout the county in order to begin a coordinated and comprehensive discussion of watershed management strategies.*
    - Introduce new groups to knowledge and experience of groups that have already embarked on the process of developing watershed management plans.
    - Groups in the process of developing watershed management plans will have a chance to refine the goals of their plans with new information to be collected by the GPS watershed mapping effort planned in this proposal.
- *Upon collecting baseline data, groups will immediately put the information to use in collectively writing the analysis portion of the watershed chapter that will describe, among other things, opportunities for restoration, and general recommendations for their watershed.*
    - Specific projects will be aided in securing funding for implementation by documenting how those projects have broad recognition.
    - Watersheds without high citizen involvement will benefit from the countywide initiative to gather baseline information.

B. Explain how the proposal will help define and illustrate relationships between watershed process (including human elements), watershed management, and the primary goals and objectives of the CALFED.

Our proposal illustrates the key role that locally-driven watershed management efforts can play in CALFED's larger effort to restore the Bay-Delta system. CALFED proposes ambitious, comprehensive restoration of the Delta habitat and the Delta species. However, the Delta is only the most visible component of the larger estuary system, and restoring the health of the Delta is dependent to some degree on restoring the health of its tributaries. These tributaries are the source of its water and the destination of many of the migratory species which pass through. Restoring the health of these tributaries could not be accomplished through a centralized ecosystem restoration process. Tributary watersheds present an array of impairments and restoration opportunities so vast that local involvement and initiative is essential. In Contra Costa County we lack key baseline information on the resources and needs of our watersheds. Our proposal seeks to fill this gap and promote additional local participation in watershed assessment and management. In this way, we can restore and protect important local resources, such as historic steelhead and salmon runs and creek water quality, that contribute, at least in a small way, to the overall goal of restoring the Bay-Delta system.

This project will directly motivate local residents to experience the watershed by collecting data and observations about the area. This connection to the natural environment is critical to establish, especially in urban areas where the effects of non-point source pollution are compounded by the high density of people and where creek channels are often modified in an effort to control flooding and channel erosion. The data that is collected will be published in the Atlas, providing a citizen connection to government-sponsored watershed involvement. Likewise, the information presented in the Atlas will serve as the framework for future activities, such as initiation of formal watershed-specific planning processes and implementation of actual restoration projects.

We hope this project will be a significant step toward more and more effective creek enhancement and protection, transforming the creeks that wind through our communities into amenities rather than liabilities. We hope the project will expose citizens to the hidden value of creeks, which are often one of the few natural resources in their neighborhood and key connection to the natural environment.

This will then give these citizens the tools necessary to establish the parameters of watershed management and provide a plan that has been drafted from the ground up. Resulting actions from these planning efforts will have the highest likelihood of success given a group with the commitment derived from living within the watershed.

C. Identify a lead agency for environmental compliance, such as CEQA or NEPA. Describe the program's strategy and timetable on environmental compliance.

The Contra Costa County Community Development Department will serve as the lead agency with CEQA authority that will grant the statutory exemption of 15262 Feasibility and Planning Studies. This exemption applies to all the activities that will take place as a result of the proposed project. Everything to be accomplished by the project will be categorically exempt and will not require further CEQA documentation other than noting which category the exemption falls under.

Authority Cited: Sections 21083 and 21087, Public Resources Code
Reference: Sections 21102 and 21150, Public Resources Code.

6. Describe any other important aspects of your program that you could not address in the above items, and that you feel are critical to fully describing your project.

- Data collected will complement mapping tools such as the nascent Land Use GIS being developed by the community development department and the 1:400 countywide aerial orthophotos under development by the Public Works Department.
- Facilitating extensive Outreach and Education beyond the regular participants of the Watershed Forum will strengthen the outcome of the countywide watershed assessment.
- Results from outreach will benefit projects in progress that are being carried out through sub-groups of the Forum. For example more projects will be added to the database being developed by the Mitigation Coordination Committee of the Forum. This committee is trying to match mitigation dollars from development to planned restoration and enhancement projects in need of funding.
- Outreach and promotion of watershed awareness is critical at a time when the largest bond measure in the history of the US was passed. County residents need to be aware that the opportunity for funding projects exists and that the time to conceive projects that have high potential to become fulfilled has arrived. Efforts are also underway to consider additional local funding measures for open space resources, and creek and watershed activities could be included in future such programs if citizen interest so warrants.

Watersheds of Contra Costa County

Watersheds	Sub-Watersheds
Alhambra Creek	Franklin Creek and Arroyo del Alhambre
Rodeo Creek	
Refugio Creek	
Pinole Creek	
Garrity Creek	
Rheem Creek	
San Pablo Creek	
Wildcat Creek	
Baxter Creek	
Cerrito Creek	
Walnut Creek	Pacheco Creek, Grayson and Murderer's Creeks, Galindo and Pine Creeks, Las Trampas, Reliez Creek, Tice Creek, Grizzly Creek San Ramon Creek (Green Valley Creek, Sycamore Creek, Bollinger Creek, San Cantanio Creek)
Mt Diablo Creek	
Kirker Creek	
East Antioch Creek	
West Antioch Creek	
Marsh Creek	Sand Creek, Deer Creek, Dry Creek, Briones Creek
Kellogg Creek	
Brushy Creek	
S. San Ramon Ck	West Alamo and Alamo Creeks
San Leandro Ck	Moraga Creek, Indian Creek

Task Description	Completion Date	In-Kind Match					Estimated Costs	Schedule																								
		County	Local	Costs we Hope to Fund w/ CALFED Grant	Costs We Hope to Fund w/ SWRCB Grant	Total	Labor	2000			2001													2002									
	by the end of the month indicated							October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September
Task 1: Administration		$54,155				$54,155																										
The county will perform and fund administrative costs, including project oversight and coordination, incidental supplies and specific sub-tasks described below																																
Task 2: Watershed Forum conceives Atlas project, staff defines framework of proposal	May-01	$11,800	90 hours	$0	$0	$11,800																										
Task 3: Catalogue the range of existing information on creeks and watersheds	Dec-01	$15,945	150 hours	$0	0	$15,945																										
Task 4: Develop Baseline Watershed GIS and Statistical Database	Jun-02	$3,710	50 hours	$0	$6,250	$9,960																										
Task 5: GPS Data Collection and Watershed Mapping in the Field		$11,600		$29,135		$40,735																										
A) Technical Set-up	Jan-02																															
1. Purchase 4 @ $4090 each GPS units	Jan-02			$16,360		$16,360																										
2. Hire & train two graduate students to assist in designing and implementing volunteer data collection effort	Jan-02	$400		$850		$1,250	40 hours @ $15 (Grad Students) 10 hours @ $25 (Consultant) 5 hours @ $80 (County Staff)																											
3. Receive 6 hour training for GPS use and data dictionary set-up provided by GPS unit vendor	Jan-02			$400		$400	15 hours @ $15 (Grad Students) 7 hours @ $25 (Consultant)																											
B) Develop a list of observations and features to be recorded and mapped using Global Positioning System ("GPS") units: - Develop a list of catagories to consider, - Solicit feedback on which data gaps are most critical, - Develop final data collection plan	May-02	$1,600		$1,700		$3,300	80 hours @ $15 (Grad Students) 20 hours @ $25 (Consultant) 20 hours @ $80 (County Staff)																											
C) Develop a protocol for citizen volunteer data collection, based on literature review of existing protocols	May-02	$800		$3,250		$4,050	150 hours @ $15 (Grad Students) 40 hours @ $25 (Consultant) 10 hours @ $80 (County Staff)																											
D) Conduct 2-3 half day GPS data collection trainings	Jun-02	$4,000		$1,575		$5,575	80 hours @ $15 (Grad Students) 15 hours @ $25 (Consultant) 5 hours @ $80 (County Staff)																											
E) Collect GPS data with groups of trained watershed GPS teams	Jul-02	$1,600		$2,800		$4,400	120 hours @ $15 (Grad Students) 40 hours @ $25 (Consultant) 20 hours @ $80 (County Staff)																											
F) Receive guidance on this task from the Watershed Forum "wf" and from a Watershed Forum Data Collection Subcommittee "x"	Jul-02	$3,200	216 hours	$2,200		$5,400	80 hours @ $15 (Grad Students) 40 hours @ $25 (Consultant) 40 hours @ $80 (County Staff)																	wf	x	wf	x	wf	x	wf	x			
Task Product(s): GPS Training Protocol for local volunteers; Catalog of Creek Features mapped by local watershed volunteers using GPS units																																
Success Criteria: To engage data collection efforts in watersheds that represent the diversity of geographic, ethnic and economic diversity of the county																																
Task 6: Integrate newly collected GPS data into GIS database and Watershed Atlas				**$6,100**		$6,100																										

"Consult"=Contract ProjCoord. at CDD
"County staff" = Proj Mngr at CDD and other perm staff

"Sr. Consult"= Pub Wrks Contract GIS coordinator
"GIS Consult"=Pub Wrks Contract GIS Tech.

"Grad Stds" = A. Fateman C. Tin at U of Mich

Task Description	Completion Date	In-Kind Match					Estimated Costs	Schedule																												
		County	Local	Costs we Hope to Fund w/ CALFED Grant	Costs We Hope to Fund w/ SWRCB Grant	Total	Labor	2000			2001													2002												
	by the end of the month indicated							October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September					
A) Develop new data layers by combining orthophoto and contour shape files to help locate tributaries to	Sep-02			$2,400		$2,000	80 hours @ $30 (GIS Consultant)																													
B) Plot wall-sized display maps to illustrate GPS data collection outcomes.	Sep-02			$2,000		$2,000	20 maps @ $100 each																													
C) Prepare written report to accompany maps and explain outcomes.	Sep-02			$1,700		$1,700	10 hours @ $50 (Sr. Consultant) 40 hours @ $30 (GIS Consultant)																															
Task Product(s): Newly mapped data from GPS collection defforts will be available for future in depth watershed assessments and for inclusion in the county watershed atlas																																				
Wall Sized maps of GPS data available for outreach and educational purposes																																				
Success Criteria: To fill information gaps and provide a more accurate baseline watershed assessment																																				
Task 7: Digitize watershed data from paper maps and from aerial photo interpretation				**$6,300**	$4,100	$10,400																														
A) Determine what additional geographic information available in paper format would be the most valuable additions to the Watershed GIS.	Jan-02			$400	$600	$1,000	20 hours @ $30 (GIS Consultant) 5 hours @ $80 (County staff)																															
from existing paper maps. Such layers might include: - General channel type labels for major creeks - Public ownership of creek channels. - Interpret County's new digital orthophotos to identify creeks (riparian areas) not already mapped and to update our limited and very out of date data on creek locations and channel conditionswatersheds as a pilot. Intended layers include historic creek routes, flood plains, and channel conditions.	Jan-02			$5,900	$3,500	$9,400	300 hours @ $30 (GIS Consultant) 5 hours @ $80 (County staff)																															
Task Product(s): More information will be added to the watershed atlas; New watershed data layers for county GIS created from paper maps will be available for future in depth watershed assessments and for inclusion in the county watershed atlas																																				
Success Criteria: Provide new GIS information that is useful																																				
Task 8: Create more opportunities for public participation in developing creek restoration strategies and priorities	Mar-02			**$8,620**		$8,620																														
A) Outreach to local groups who are interested in GPS and local watershed activities by attending local watershed and environmental group meetings, local	Mar-02			$3,060		$3,060	60 hours @ $15 (grad students) 40 hours @ $25 (Consultant) 7 hours @ $80 (County staff)																															
B) Facilitate local leadership in developing educational outreach efforts for county citizens about creek, watershed and water quality issues.	Mar-02			$1,500		$1,500	40 hours @ $15 (Grad Students) 20 hours @ $25 (Consultant) 5 hours @ $80 (County Staff)																															
C) Conduct 1-2 community meetings to demonstrate GPS capability, provide a virtual tour of the watersheds, and promote awareness.	Sep-02		20 hours	$2,160		$2,160	40 hours @ $25 (Consultant) 20 hours @ $80 (County Staff)																															
D) Conduct 1-2 public workshops upon completion of the Atlas to publicize outcomes. CCTV could be requested to televise these events.	Sep-02			$1,900		$1,900	10 hours @ $15 (grad students) 5 hours @ $25 (Consultant) 5 hours @ $80 (County staff)																															
Task Product(s): Introduce County wide Watershed GPS project to at least one local group in each watershed																																				
Success Criteria: Increasing awareness of watershed issues and creek restoration opportunities																																				

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Task Description	Completion Date	In-Kind Match		Costs we Hope to Fund w/ CALFED Grant	Costs We Hope to Fund w/ SWRCB Grant	Total	Estimated Costs	Schedule																								
		County	Local				Labor	2000			2001													2002								
	by the end of the month indicated							October	November	December	January	February	March	April	May	June	July	August	September	October	November	December	January	February	March	April	May	June	July	August	September
Task 9: Produce "CCC Watershed Atlas and Creek Restoration Strategy"	Apr-02	$10,620	300 hours	$0	$32,900	$43,620																									
Task 10: Reporting and presentations		$480		**$850**		$3,580																									
A) Quarterly progress reports: Progress reports on project implementation, including financial status, milestones reached, products completed, and general assessment of overall progress, including problems encountered or anticipated.	Sep-02	$160		$100		$260	4 hours @ $25 (Consultant) 2 hours @ $80 (County Staff)																									
B) Draft final report: Draft report summarizing the project implementation, achievements, product deliveries, financial status. To be sent to the Contract Manager for review and comment.	Aug-02	$160	$2250 in hours for grad students	$250		$2,660	150 hours @ $15 (Grad Students) 10 hours @ $25 (Consultant) 10 hours @ $80 (County Staff)																									
C) Final report: Revised report incorporating comments from the Contract Manager and others.	Sep-02	$80		$250		$330	10 hours @ $25 (Consultant) 10 hours @ $80 (County Staff)																									
D) Presentations: Delivering at least one final summary presentation to CALFED.	Sep-02	$80		$250		$330	10 hours @ $25 (Consultant) 10 hours @ $80 (County Staff)																									
Grand Totals		**$54,155**	**$2,250**	**$50,000**		**$150,760**																									
826 hours of county-wide watershed volunteers																															

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Task Description	Labor Rate*	Hours	Total Labor	Supplies	Travel	Materials	Sub-contract**	Match	CALFED	Total
Task 1: Adminstration			The County provided match for Tasks 1-9 is equivelant to Administration Costs: $54,155***							
Task 2: Watershed Forum conceives Atlas project, staff defines framework of proposal			$11,800					$11,800		$11,800
Task 3: Catalogue the range of existing information on creeks and watersheds			$15,945					$15,945		$15,945
Task 4: Develop Baseline Watershed GIS and Statistical Database			$9,960					$3,710		$9,960
Task 5: GPS Data Collection and Watershed Mapping in the Field			$24,415			$16,360		$11,600	**$29,135**	$40,735
Task 6: Integrate newly collected GPS data into GIS database and Watershed Atlas			$6,100						**$6,100**	$6,100
Task 7: Digitize watershed data from paper maps and from aerial photo interpretation			$5,300					$6,300	**$5,300**	$10,400
Task 8: Create more opportunities for public participation in developing creek restoration strategies and priorities			$8,620						**$8,620**	$8,620
Task 9: Produce "CCC Watershed Atlas and Creek Restoration Strategy"			$43,620					$10,620		$43,620
Task 10: Reporting and presentations			$3,580					$2,730	**$850**	$3,580
Totals:			$129,340			$16,360		$62,705	$50,000	$150,760

*Provide benefits/salary percentage here: All contract labor doesn't include benefits 0% benfits to salary

**Provide a separate itemized budget using this format for subcontracts

Please see Program Budget Sheet for the Labor Rate and Hours

***All Supplies and Travel used will be provided as an in-kind match to program costs